

**(57) Abstract**

The invention concerns generally the technological field of antenna arrangements in mobile stations. The invention also concerns a mobile station equipped with such an antenna arrangement. One idea of the present invention is providing a planar antenna in which the printed wired board (PWB) of the mobile station is used. The planar antenna has preferably an air gap between the radiator element (216) and the ground plate (218). In order to reduce the effects of the RF fields to other phone electronics there is a sheet of low reluctance material (245) for reducing the RF fields. The sheet of low reluctance material is so located that it covers an area of the printed wired board which is not covered by the radiator element or the ground plane of the planar antenna. The low reluctance material is preferably ferrite material, such as flexible ferrite sheet, and it may be attached to the display unit (208a, 208b) or on the PWB (234).

Fig. 2